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# OzoNews

A fortnightly electronic news update on ozone and climate protection and the implementation of the Montreal Protocol brought to you by OzonAction

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## Global

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### **1. World takes a stand against powerful greenhouse gases with implementation of Kigali Amendment**

- The Kigali Amendment to the Montreal protocol will reduce the projected production and consumption of hydrofluorocarbons (HFCs) by more than 80 per cent over the next 30 years.
- If fully supported, the amendment can avoid up to 0.4°C of global warming by the end of this century.
- 65 countries have already ratified the amendment, with more expected in the weeks to come.



Nairobi, 03 January 2019 – The world has taken an important step on the road to drastically reduce the production and consumption of powerful greenhouse gasses known as hydrofluorocarbons (HFCs) and limit global warming, with the Kigali Amendment to the Montreal Protocol on Substances that Deplete the Ozone Layer coming into force on 1st January 2019.

If fully supported by governments, the private sector and citizens, the Kigali Amendment will avoid up to 0.4°C of global warming this century while continuing to protect the ozone layer. The amendment will substantively contribute to the goals of the Paris Agreement.

HFCs are organic compounds frequently used as refrigerants in air conditioners and other devices as alternatives to ozone-depleting substances controlled under the Montreal Protocol. While HFCs themselves do not deplete the ozone layer, they are extremely potent greenhouse gases with global warming potentials that can be many times higher than carbon dioxide.

The parties to the amendment have put in place practical arrangements for its implementation, including agreements on technologies for the destruction of HFCs and new data reporting requirements and tools. The amendment comes with provisions for capacity-building for developing countries, institutional strengthening and the development of national strategies to reduce HFCs and replace them with alternatives. Phasing down HFCs under the Kigali Amendment may also open a window to redesign cooling equipment that is more energy efficient, further increasing the climate gains.

Implementation of new targets set out in the amendment will be done in three phases, with a group of developed countries starting HFCs phase-down from 2019. Developing countries will follow with a freeze of HFCs consumption levels in 2024 and with a few countries freezing consumption in 2028.

Ratified by 65 countries so far, the Kigali Amendment builds on the historic legacy of the Montreal Protocol agreed in 1987. The Protocol and its previous amendments, which require the phasing out of the production and consumption of substances that cause ozone depletion, have been universally ratified by 197 parties.

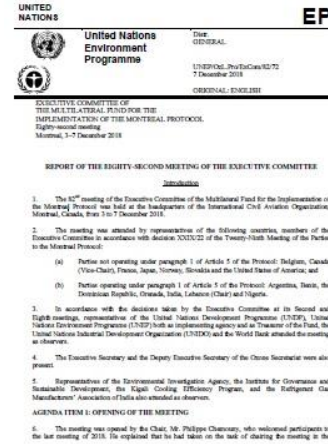
The broad support for and implementation of the Montreal Protocol has led to the phase-out of more than 99 per cent of nearly 100 ozone-depleting chemicals and significantly contributed to climate change mitigation.

Evidence presented in the latest Scientific Assessment of Ozone Depletion shows that the ozone layer in parts of the stratosphere has recovered at a rate of 1-3% per decade since 2000. At projected rates, Northern Hemisphere and mid-latitude ozone is scheduled to heal completely by the 2030s followed by the Southern Hemisphere in the 2050s and polar regions by 2060.

**See also >>> ["The Kigali Amendment: The New Year's Resolution We Must Not Break"](#)**, Guest article, IISD News Hub, 2 January 2019, Tina Birmpili, Executive Secretary, Ozone Secretariat.

**The UN Environment, Ozone Secretariat, 3 January 2019**

## 2. Report of the eighty-second meeting of the Executive Committee



### Introduction

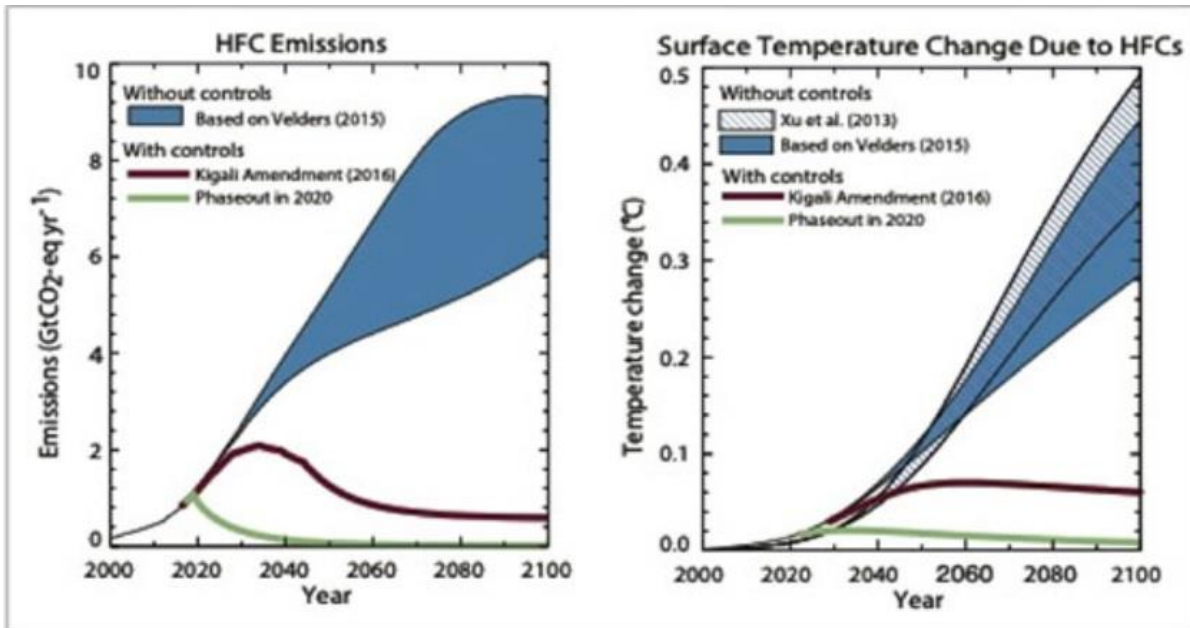
1. The eighty-second meeting of the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol was held at the headquarters of the International Civil Aviation Organization, Montreal, Canada, from 3 to 7 December 2018.
2. The meeting was attended by representatives of the following countries, members of the Executive Committee in accordance with decision XXIX/22 of the Twenty-Ninth Meeting of the Parties to the Montreal Protocol:
  - (a) Parties not operating under paragraph 1 of Article 5 of the Protocol: Belgium, Canada (Vice-Chair), France, Japan, Norway, Slovakia and the United States of America; and
  - (b) Parties operating under paragraph 1 of Article 5 of the Protocol: Argentina, Benin, the Dominican Republic, Grenada, India, Lebanon (Chair) and Nigeria.
3. In accordance with the decisions taken by the Executive Committee at its Second and Eighth meetings, representatives of the United Nations Development Programme (UNDP), United Nations Environment Programme (UNEP) both as implementing agency and as Treasurer of the Fund, the United Nations Industrial Development Organization (UNIDO) and the World Bank attended the meeting as observers.
4. The Executive Secretary and the Deputy Executive Secretary of the Ozone Secretariat were also present.
5. Representatives of the Environmental Investigation Agency, the Institute for Governance and Sustainable Development, the Kigali Cooling Efficiency Program, and the Refrigerant Gas Manufacturers' Association of India also attended as observers. [...]

[Read/download the full report](#)

[The Multilateral Fund for the Implementation of the Montreal Protocol](#)

## 3. Global agreement addressing ozone depletion will also bring large climate benefits





Global HFC scenarios without global controls and with full compliance with the Kigali Amendment. A scenario in which global HFC production phases out by 2020 also is shown. Credit: Scientific Assessment of Ozone Depletion:2018, Executive Summary.

The Kigali Amendment to the Montreal Protocol entered into force this week, mandating the phase down of super climate pollutants called hydrofluorocarbons (HFCs). The amendment has now been ratified by 65 parties, including most recently Japan and Nigeria, surpassing the 20 ratifications needed to bring it into force. While US industry is supporting ratification, the Trump administration has not yet indicated whether it will send the amendment to the Senate for its advice and consent.

Two years ago, the parties to the Montreal Protocol agreed in Kigali, Rwanda to an amendment that will phase down the use of HFCs, potentially avoiding up to 0.5 degrees Celsius of average worldwide warming by 2100, if an expedited implementation strategy is followed. HFCs are often used in air conditioners and refrigerators as replacements for other substances that, when they break down, wind up depleting the stratospheric ozone layer that protects life on Earth from harmful radiation. HFCs don't have that ozone-depleting effect, but do act as extremely potent greenhouse gases, exacerbating the climate change being created by emissions of carbon dioxide from the use of fossil fuels.

The initial phase-down schedule of the Kigali Amendment—under which HFC emissions would peak in 2040—will capture most of the 0.5 degrees C potential avoided warming, but not all, leaving up to 0.1 degrees C for future action. Assuming compliance, the amendment would avoid HFC emissions with the global warming equivalent of up 4.1 billion tons of carbon dioxide per year by 2050. That total of avoided emissions would rise to nearly 9 billion tons per year by 2100.

A “leapfrog” strategy that arrested global HFC production by 2020 would avoid the equivalent of an additional cumulative 53 billion tons of carbon dioxide from 2020 to 2060, according to the quadrennial Scientific Assessment of Ozone Depletion, prepared by the treaty’s Scientific Assessment Panel. The panel released its Executive Summary in November.

The scientific assessment notes that beyond phasing down HFC use, improving the energy efficiency of air conditioners and other cooling equipment has the potential to double the climate benefits of the Kigali Amendment. That’s to say, these combined strategies for dealing with HFCs could reduce projected warming by up to 1 degree by the end of the century. Such a reduction would temper some of the worst impacts of climate change now foreseen.

In a formal decision at their annual meeting in November, the parties to the Montreal Protocol noted that “improvements in the energy efficiency of refrigeration and air-conditioning equipment during the transition to

low-global-warming-potential alternative refrigerants can potentially double the climate benefits of the Kigali Amendment” and authorized increasing funding for countries to implement energy efficiency. The decision directs the Multilateral Fund, the treaty’s dedicated financing mechanism, to explore cooperation and co-funding with other institutions, including the World Bank, which pledged \$1 billion for the combined strategy in the runup to the Kigali Amendment.

The Scientific Assessment Panel reported that empirical evidence now shows that the treaty’s efforts to cut chlorofluorocarbons (CFCs) and other ozone-depleting substances was responsible for healing the stratospheric ozone layer, and that the Antarctic ozone hole should recover by the 2060s. The level of stratospheric ozone depleting substances in the atmosphere is continuing to decline, the panel reported, and total ozone levels in the Antarctic are showing signs of recovery.

As it is implemented and the parties gain confidence, the Kigali Amendment’s initial phase-down schedule will very likely be shortened for maximum climate protection. Such a move would be consistent with the history of the Montreal Protocol, which is often referred to as a “start-and-strengthen” treaty, because it has continuously strengthened its controls on ozone-depleting substances during 31 years of operation, after starting with what the current politics would allow, learning by doing, and gaining confidence to do still more.

Over the last three decades, this work-horse treaty has not only solved the first great threat to the global atmosphere—the destruction of the stratospheric ozone layer—but it has also solved an amount of the climate problem that would have equaled the contribution of carbon dioxide today. The Kigali Amendment and associated energy efficiency efforts are poised to add even more climate protection, providing hope that it is still possible to slow climate change in time to avoid the looming existential threat of uncontrollable climate change impacts.

**Bulletin of the Atomic Scientists, 2 January 2019, By: Durwood Zaelke**

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## Africa

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### 4. Rwanda launches centre to measure global warming gases

Rwanda has launched the first African Air Quality and Climate Laboratory equipped with the “Medusa system” that will measure more than 50 gases that deplete the ozone layer.

The ozone layer is a belt of the naturally occurring gas “ozone above Earth that serves as a shield from the harmful ultraviolet radiation emitted by the sun.

The \$2 million project is being implemented by the ministries of Education, Environment and Rwanda Meteorological Agency in partnership with the Massachusetts Institute of Technology (MIT).

According to Eugene Mutimura, the Minister for Education, the laboratory which will be based at the University of Rwanda’s College of Science and Technology, will have equipment be installed on top of Mugogo Mountain in Nyabihu District and at Kalisimbi volcano so as to measure Hydrofluorocarbons (HFCs) that deplete the ozone layer.

The equipment on the mountains will observe climate change in Africa, detect the sources and the amount of the gases being emitted in regional countries and inside Rwanda.

“This climate observatory project that set up the centre of excellence in Africa with air quality and climate lab will be informing policy makers on how to mitigate and adapt to climate change.

Policy makers will be able to come up with measures to control car emissions, curbing deforestation and encouraging more tree planting, reducing use of fossil fuels, developing smart green cities and transport among many others,” he said.

He added that a group of Rwandan technicians who studied atmospheric sciences from the University of Massachusetts are implementing the project.

Dr Jimmy Gasore, an atmospheric scientist and chief scientist of the climate observatory project said that with climate observation, the government can predict weather events for adaptation and mitigation measures.

“We are a team of technicians working on measuring if these global warming gases such as carbon dioxide and Hydrofluorocarbons are being reduced or not,” he said

Gasore added that the climate lab will also coordinate eight other air quality testing equipment across all provinces that monitor and show sources of air pollution in various parts of the country.

He noted that the data from the system will also enable Rwandan experts during different negotiations on climate agreements.



### **Implementation of climate agreements**

Faustin Munyazikwiye, the Deputy Director General of Rwanda Environment Management Authority who is also a climate negotiator, said the Medusa system was timely since the world had agreed to phase out Hydrofluorocarbons (HFCs) that deplete the ozone layer and having equipment to measure them in the atmosphere is a better intervention.

The Kigali amendment to the Montreal Protocol adopted in 2016 to phase down the use of hydrofluorocarbons (HFCs) entered into force after 65 countries ratified the agreement which will see global nations gradually reduce global-warming-inducing HFCs by more than 80 per cent over the next 30 years.

The implementation of the move will avoid up to 0.5°C of warming by 2100 which is a contribution to the Paris agreement that seeks to keep global warming below 2 degrees Celsius.

“We are very glad to launch the system which measures more than 50 and more gases under the Montreal Protocol as amended in Rwanda. This system came at the right time when Kigali Amendment on Montreal Protocol came into force 1st January 2019,” said Munyazikwiye.

“We continue to come up with measures in mitigating and adapting to climate change and with the pledge of mobilizing \$100 billion every year by developed countries to least developed countries, we will win the battle, he added.

**The New Times, 14 January 2019, By: Michel Nkurunziza**

## 5. Morocco successfully launches satellite to study the ozone layer المغرب ينجح في إطلاق قمر صناعي لدراسة طبقة الأوزون

**الرباط:** نجح المغرب بإطلاق قمر صناعي جامعي صغير لدراسة طبقة الأوزون، بالتعاون مع مؤسسة الفضاء البريطانية KSF Space، وإشراف الاتحاد الدولي للتكنولوجيا الخضراء IFGICT بالولايات المتحدة . وأعلنت مؤسسة الفضاء البريطانية و المدرسة العليا للمعلومات و تحليل النظم ENSIAS بجامعة محمد الخامس بالرباط عن نجاح إطلاق تجربة القمر الصناعي لدراسة الأوزون والانبعثات الحرارية من المكسيك، باستخدام انترنت الأشياء التكنولوجية IoT للمرة الأولى.



وقال مدير مؤسسة الفضاء البريطانية، محمد الكيالي لـ"إيلاف المغرب" إن هذه المبادرة تعد الأولى من نوعها على المستوى العربي لكونها تمثل ريادة مغربية في مجال تصنيع الأقمار الصناعية الصغيرة عن طريق توظيف تقنية انترنت الأشياء لأول مرة، والتي تعتمد على التواصل عبر الأقمار الصناعية دون الحاجة لتغطية أرضية، مما يشكل نجاحا ملحوظا، كتجربة ذات بصمة قوية تعكس مدى إيجابية نوعية هذه المشاريع البحثية الجامعية بالمغرب".

وأفاد أن طلبه سلك الماجستير بالمدرسة العليا للمعلومات و تحليل النظم قاموا بعمل التحليل والتصنيع لمجموعة من الأقمار الصناعية التي ستستخدم لدراسة طبقة الأوزون والتغير المناخي، بحيث يتم تصنيع أقمار صناعية صغيرة بهدف إرسالها للفضاء في الفترة المقبلة.

وأشار لوجود تجارب عديدة مقبلة من جامعات مغربية و دولية خلال شهر مارس المقبل، من خلال عمل مشترك لثلاث جامعات مغربية، فضلا عن دولة الهند وبلدان أخرى، في إطار التعاون مع المغرب، في مهمة لدراسة الأوزون. [...]



## Asia Pacific

### 6. UNDP and WALTON join hands to save Ozone Layer (Bangladesh)



The United Nations Development Programme (UNDP) and WALTON signed an agreement on Hydrofluorocarbons (HFCs) phase out project, on 29 December at the company's offices in Dhaka.

Sudipto Mukerjee, Resident Representative, UNDP Bangladesh and SM Ashraful Alam, Managing Director, Walton Hi-Tech Industries Limited signed the agreement on behalf of their respective organizations.

After the ratification of the Montreal Protocol in 1990, UNDP has been working with the Ministry of Environment, Forest and Climate Change and private industries to protect the ozone layer by phasing out the production of numerous substances that are responsible for ozone depletion.

In line with this, UNDP and the Ministry of Environment, Forest and Climate Change, with funding from the Montreal Protocol, will support WALTON, the largest refrigerator manufacturer in Bangladesh, to phase out HFCs. These HFCs are mainly used in refrigerators, which are contributing to global warming rapidly. Earlier in 2011, UNDP, supported WALTON to phase out HCFC-141b.

Attending the signing ceremony, Sudipto Mukerjee Said, "UNDP is proud to partner with WALTON in the world's single largest private sector conversion project to save the planet and help to achieve the Sustainable Development Goal 12-Sustainable Consumption and Production." He also thanked the Department of Environment, the Ministry of Environment, Forest and Climate Change, and the Montreal Protocol, for partnering with UNDP.

SM Ashraful Alam highlighted WALTON's effort to keep Bangladesh green. "Conservation of environment is always our top priority and we are glad to take part in this journey with UNDP to save the Ozone layer" Among others Khurshid Alam and Shaila Khan, Assistant Resident Representatives, UNDP, Mamunur Rashid, Climate Change Specialist, UNDP and other senior officials from UNDP and WALTON were present.

**United Nations Development Programme (UNDP), 30 December 2018**

### 7. UNIDO, Italy support small manufacturers in Iran to comply with global environmental agreements



The United Nations Industrial Development Organization (UNIDO) and Iran's National Ozone Unit (NOU) today [18 December 2018] organized a workshop in Tehran to formulate a technical and business strategy to support small manufacturers of refrigeration equipment and insulation material with the adoption of new ozone- and climate-friendly substances and technologies. This will contribute to Iran's efforts to comply with its commitment, under the Montreal Protocol, to reduce its use of ozone-depleting substances – specifically, hydrochlorofluorocarbons (HCFC) – commonly used in this sector.

Through the Multilateral Fund for the Implementation of the Montreal Protocol, UNIDO and Italy assist small manufacturers of refrigeration equipment in Iran – ranging from small chillers to domestic and commercial-scale refrigerators – to adapt their manufacturing processes and products in compliance with the second stage of the HCFC phase-out plan set by the Iranian government.

During the workshop, technology suppliers explained how small manufacturers can continue their operations with alternative chemical substances, while maintaining safety. "The NOU will consider the outputs of this workshop in the national strategy, hoping to successfully meet challenges ahead, specifically for small and medium-sized enterprises," said Medi Bakhshizade, project coordinator of Iran's National Ozone Office.

Several alternatives to HCFCs are readily available, but some of them are known to have high global warming potentials (GWP). Under the Kigali Amendment to the Montreal Protocol, a direct switch to natural refrigerants, which have zero ozone depleting potential (ODP) and low GWP, is encouraged.

In the case of Iran, the most promising alternative for small companies is cyclopentane, which could be locally produced if there is enough demand. However, the substance is high flammable, meaning new technical skills and safety installations and equipment would be required and these constitute a major financial barrier for small companies. Active cooperation between companies, local chemical formulators and technology suppliers could help tackle this barrier.

UNIDO project manager Fukuya Iino said, "UNIDO would like to promote energy-efficient technologies while phasing out HCFCs. Small companies are faced with challenges to adopt new technologies, and this is why we are asking possible technology suppliers to share their know-how with them."

A number of technology and financing options to support small manufacturing companies were presented during the workshop. The event offered a platform for small beneficiary manufacturers, technology suppliers, chemical material formulators, governmental focal points, and other stakeholders, to share knowledge and develop partnerships. [...]

**Modern Diplomacy, 18 December 2018**

## 8. New Zealand introduces HFC gas permit scheme



The Environmental Protection Authority (EPA) is implementing a new permitting system in response to the Kigali Amendment, an international agreement the New Zealand Government has signed, to reduce the levels of hydrofluorocarbons (HFC) gases in the Earth's atmosphere.

Dr Fiona Thomson-Carter, General Manager of the EPA's Hazardous Substances group says: "The permit scheme will be introduced from February 2019, and will require all bulk imports and exports of new and recycled HFC gases into/out of New Zealand to have a permit."

The new permit system intends to help New Zealand reach the first modelled phase-down target of 1338.3 carbon dioxide-equivalent tonnes of HFC gas, by 31 December 2020.

Dr Thomson-Carter explains, "HFC gases have been identified as having a high global warming potential (GWP) that can be as much as 50 to 14,800 times more potent than carbon dioxide.

"We expect the permit scheme to be an adjustment for industries that use large quantities of HFC gases, like refrigeration and air-conditioning, as they will need to reduce their use of HFC gases and switch to other more environmentally friendly-refrigerants over time," says Dr Thomson-Carter.

"Under the permit system New Zealand's total net import quantity of new bulk HFC gases will be split into a range of permits that will include 80 percent being made available to holders with grandparented eligibility.

"This grandparented eligibility is open to previous importers of HFC gases from January 2015 to December 2017. Importers will have until 18 March 2019 to complete the one-off eligibility process, and will still need to obtain an annual import permit," says Dr Thomson-Carter.

"A number of special permits, with a number of requirements, will also be available for those that may be unable to get grandparented eligibility."

New Zealand will officially ratify the Kigali Amendment to the Montreal protocol with the United Nations in October 2019.

The EPA's role under the Ozone Layer Protection Regulations will see the Authority manage the scheme which will decrease the amount of HFC gases permitted over time.

**Voxy, 14 December 2018**

# North America

## 9. MOPIA aiming to strengthen Manitoba's ODS regulation (Canada)



Manitoba's Ozone Depleting Substances and Other Halocarbons Regulation was originally implemented back in 1992 and was amended a couple of times most notably to include potent greenhouse gas hydrofluorocarbons (HFCs) back in 2005.

As new technology has emerged, innovations and improvements have been made in the various affected industry sectors and changes have been implemented nationally (Federal Halocarbon Regulation) and with the Montreal Protocol, Manitoba's Regulation is due for a thorough evaluation and amendments to better safeguard the environment and make industry more proficient.

As such, MOPIA continues to encourage discussion and input on what possible amendments may improve and strengthen the regulation looking forward towards 2030.

Dialogue at our summer outreach sessions has allowed MOPIA to create a draft document "Proposed MR 103/19 Regulation Amendments" which can be seen on our website.

Your continued input is encouraged towards establishing a final document we are aiming to submit to the Manitoba Government by the approaching summer of 2019.

Sectors primarily affected include those within the A/C, HVACR (i.e. refrigerants), solvents (i.e. HFCs), foams (i.e. HFCs), fire protection (i.e. halons & alternatives), sterilants, agriculture (i.e. soil and produce fumigants) among others.

Comments/input from any stakeholder including the public is encouraged via email. All perspectives will be summarized in a formal document that will be submitted to Manitoba Sustainable Development. MOPIA will continue to solicit input at outreach sessions planned for the Spring 2019 across Manitoba and through promotion on our website.

**[The Manitoba Ozone Protection Industry Association Inc \(MOPIA\), e-Bulletin December 2018](#)**

## 10. Be smart about your air conditioner



Air conditioners have a high impact on the climate, both in the energy and refrigerants they use — super greenhouse gases called hydrofluorocarbons. HFCs are short-lived pollutants, but they have an impact on global warming that's hundreds to thousands of times more potent than that of carbon dioxide by mass. Yet as the world gets hotter, air-conditioner demand is growing, with experts projecting we'll have 4.5 billion units by 2050, up from about 1.2 billion today. Some states, including California, are taking action to address this problem now.

Globally, a phasedown of HFC refrigerants could avoid up to 0.5 degree Celsius of warming by 2100; the Montreal Protocol now requires countries to reduce the use of these chemicals starting in January. Parallel efforts to improve the efficiency of air conditioners can double this climate benefit, with the potential to avoid up to a full degree Celsius by the end of the century.

In addition to buying only super-efficient air conditioners — which over the lifetime of the unit will save you money and reduce climate impacts and air pollutants — you can encourage your state legislators to follow the model of California, which requires a 40 percent reduction in HFCs by 2030. Its latest efforts further prohibit refrigerants with high global warming potential in new air conditioners and commits to supporting other states to adopt similar prohibitions. New York, Maryland and Connecticut have followed suit, and other states can, too.

You can also encourage your legislators to require the highest energy efficiency standards for air conditioners, and to use their buying power to insist on only the most efficient equipment.

**The Washington Post, 2 January 2019**

## Europe & Central Asia

### 11. Kigali amendment to phase down HFCs (EU)

As the Kigali Amendment to the Montreal Protocol entered into force on 1 January, the EU was already ahead of its agreed target.

The Kigali Amendment, first signed at a United Nations Environment Programme in Kigali, Rwanda in October 2016, commits signatories to reduce their production and consumption of hydrofluorocarbons (HFCs). Developed countries agreed to reduce their HFC consumption by 10 per cent by 2019, with further reductions leading into 2036, by which time HFC consumption should be at 15 per cent of the baseline established in 2016. Developing countries committed to a deferred implementation schedule for the Kigali Amendment, beginning the “phase down” in 2024.

Hydrofluorocarbons are organic compounds containing hydrogen and fluorine atoms, most commonly used as refrigerants in air conditioning units and refrigerators. They act as a replacement for chlorofluorocarbons (CFCs), which had already been phased out under the Montreal Protocol due to the damage they caused to the ozone layer; but while HFCs are not as immediately and urgently harmful as CFCs, they have been shown to contribute significantly to global warming. The phasing down of HFC usage under the Kigali Amendment is expected to reduce global warming by up to 0.4°C by 2100, representing a substantial contribution to the objective of the Paris Agreement of keeping the Earth’s temperature rise below 2°C.

The EU, which ratified the Kigali Amendment in September 2018, has established itself as a world leader in phasing down its use of fluorinated gases (F-gases), of which HFCs represent the majority. By 2017, the EU's HFC use had already dropped by 12 per cent more than the 2019 target; and the F-Gas Regulation, brought in by the European Parliament in 2014, aims to cut the EU's emissions of F-gases by two thirds by 2030. The regulation and the Kigali Amendment form part of a wider global drive to reduce harmful emissions and prevent the exponential rise in global temperature.

**The Government Europa website, 3 January 2019**



### 12. F-Gas phase-down schedule will be maintained post-Brexit

Defra, the UK government department for environment, food and rural affairs, has announced that the F-Gas phase-down schedule will remain the same in the event of a no-deal Brexit.

If the no-deal scenario does happen, then the UK will take over from the EU the regulation of fluorinated greenhouse gases (F-Gas) and ozone-depleting substances (ODS) on 30 March.

Used as refrigerants in many appliances, including commercial refrigeration, F-Gas is scheduled to be phased down and replaced with less environmentally harmful substances.

Therefore, Defra has revealed it will follow the same schedule as the EU to phase down HFCs (hydrofluorocarbons, the most common type of F-Gas) by 79% by 2030 relative to a 2009 to 2012 baseline.

That means UK F-Gas quotas will follow the same phase down steps as the EU: limited to 63% of the baseline in 2019 and 2020, and reducing to 45% of the baseline in 2021.





Most of the rules for F-Gas and ODS will not change. However, the UK will have separate quota systems, and the IT systems UK businesses use to manage quotas and report on use will change.

Subsequently, those companies which produce, import or export products containing HFCs or ODS will need to apply for a UK quota to sell them here, and an EU quota to place them on the EU market.

Defra stated: "The Environment Agency could charge regulated businesses to recover costs of running the quota and reporting systems. It will consult before deciding whether to charge. The consultation will include the level of any charges and the activities to which they would apply."

Catering Insight, 3 January 2019, By: Clare Nicholls

## 13. HFC : une aide financière dès maintenant pour remplacer ceux visés par la F-Gas (France)

La loi de finances 2019 a été publiée. Si la taxe sur les HFC ne s'appliquera bien qu'à partir de 2021, un suramortissement de 40 % est en revanche applicable depuis ce 1er janvier et durant 4 ans pour les installations neuves qui s'en exonèrent.

La loi de finances 2019 parue au Journal Officiel du 30 décembre intègre des mesures sur les HFC adoptées via amendements par les parlementaires. La première concerne un suramortissement de 40 % instauré pendant 4 ans. L'article 25 est ainsi rédigé : « Les entreprises soumises à l'impôt sur les sociétés ou à l'impôt sur le revenu selon un régime réel d'imposition peuvent déduire de leur résultat imposable une somme égale à 40 % de la valeur d'origine, hors frais financiers, de l'ensemble des biens d'équipement de réfrigération et de traitement de l'air utilisant des fluides réfrigérants autres que ceux mentionnés à la section 1 de l'annexe I du règlement (UE) n° 517/2014 du Parlement européen et du Conseil du 16 avril 2014 relatif aux gaz à effet de serre fluorés et abrogeant le règlement (CE) n° 842/2006, affectés à leur activité et inscrits à l'actif immobilisé. La déduction est applicable aux biens (...) acquis à l'état neuf à compter du 1er janvier 2019 et jusqu'au 31 décembre 2022.

La seconde mesure confirme une taxe sur les HFC visés par la F-Gas. L'article 197 de la loi de finances concerne les hydrofluorocarbones au sens du règlement (UE) n° 517/2014 relatif aux gaz à effet de serre fluorés (...), autres que les gaz régénérés ou recyclés. »

Le montant progressif de la taxe s'échelonne selon le calendrier suivant :

- 2021 = 15 euros par tonne équivalent CO<sub>2</sub>.
- 2022 = 18.
- 2023 = 22.
- 2024 = 26.
- À compter de 2025 = 30.

À noter que la taxe est due par la personne qui réalise la première livraison des substances mentionnées, à titre gratuit ou onéreux, en France. Enfin, comme le font remarquer les signataires de la lettre d'engagement évoquée en fin d'année, il n'est aucunement fait mention d'une quelconque clause de revoyure en 2020, pour surseoir à la taxe en cas d'atteinte des objectifs de baisse.

La revue des professionnels du froid et de la climatisation (La RPF), 4 janvier 2019, Par: Pierre Le Mercier



Featured

- 
- [61<sup>st</sup> Meeting of the Implementation Committee under the Non-Compliance Procedure of the Montreal Protocol, Quito \(Centro de Convenciones QUORUM, Cumbaya\), Ecuador | 3<sup>rd</sup> Nov 2018](#)
  - [Bureau Meeting of the Twenty-Ninth Meeting of the Parties to the Montreal Protocol, Quito \(Centro de Convenciones QUORUM, Cumbaya\), Ecuador | 4<sup>th</sup> Nov 2018](#)
  - [30<sup>th</sup> Meeting of the Parties to the Montreal Protocol, Quito \(Centro de Convenciones QUORUM, Cumbaya\), Ecuador | 5 - 9 Nov 2018](#)

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[Kigali Amendment to the Montreal Protocol on Substances that Deplete the Ozone Layer, Status of Ratification 15 October 2016 to \*\*date\*\*](#)

- 
- [40<sup>th</sup> Meeting of the Open-ended Working Group of the Parties to the Montreal Protocol, 11-14 July 2018, Vienna, Austria](#)

The documents for the forthcoming 40<sup>th</sup> meeting of the Open-ended Working Group of the Parties to the Montreal Protocol (11 to 14 July 2018, Vienna), and the associated workshop on energy efficiency opportunities while phasing-down hydrofluorocarbons (9 and 10 July 2018) are available on the meeting portal and mobile app.

Read/download OEWG40 [Summary](#)  
[OEWG-40 Daily coverage by IISD](#)

- Click [here](#) for Montreal Protocol upcoming Meetings Dates and Venues

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[The UN Environment Assessment Panels](#)

The Assessment Panels have been vital components of ozone protection since the Montreal Protocol was first established. They support parties with scientific, technological and financial information in order to reach decisions about ozone layer protection and they play a critical role in ensuring the Protocol achieves its mandate.

The Assessment Panels were first agreed in 1988 to assess various direct and indirect impacts on the ozone layer. The original three panels are:

[The Technology and Economic Assessment Panel](#)

[The Scientific Assessment Panel](#)

[The Environmental Effects Assessment Panel](#)

In the past there were 4 main panels. The Panels for Technology and Economic Assessments were merged in 1990 into one Panel, now called the Technology and Economic Assessment Panel.

Why are the three current panels important to ozone layer protection? Each carries out assessment in its respective field. Every four years, the key findings of all panels are consolidated in a synthesis report.



## THE MULTILATERAL FUND FOR THE IMPLEMENTATION OF THE MONTREAL PROTOCOL

- [82<sup>nd</sup> meeting of the Executive Committee](#), 3-7 December 2018, Montreal, Canada
- [Adjusted Prorated 2018-2020 business plan of the Multilateral Fund \(16 August 2018\)](#)
- [81<sup>st</sup> meeting of the Executive Committee](#), Montreal, Canada, 18 to 22 June 2018
- [Reports of projects demonstrating alternatives to HCFC technologies \(updated 81<sup>st</sup> meeting\)](#)
- [2018 Executive Committee Primer](#)

[Learn more](#)



## OZONACTION



### **NEW OzonAction smartphone application: Good Servicing: Flammable Refrigerants Quick Guide**

#### **An interactive Quick Guide on Good Practices for Flammable Refrigerants.**

This is the electronic and interactive version of the UN Environment OzonAction Quick Guide on Good Servicing Practices for Flammable Refrigerants.

It offers easy reference to the key safety classification and technical properties of flammable refrigerants that are available in the market. It also provides important safety guidance for the installation and servicing of room air-conditioners designed to use flammable refrigerants.

This interactive guide allows you to scroll and browse the text, jump to specific chapters or use the comprehensive dynamic index to locate specific keywords, figures and tables. The application also includes a refrigerant charge size

calculator and a room size calculator for flammable refrigerants.

Available for free on the Google play store (Apple version coming soon) - Search for "UNEP Quick guide" or use the QR code.



### **NEW OzonAction smartphone application: Refrigerant Identifier Video Series**

#### **Guidance on how to identify refrigerants using a refrigerant identifier.**

This new OzonAction video series consists of short instructional videos showing how to use and maintain a refrigerant identifier.

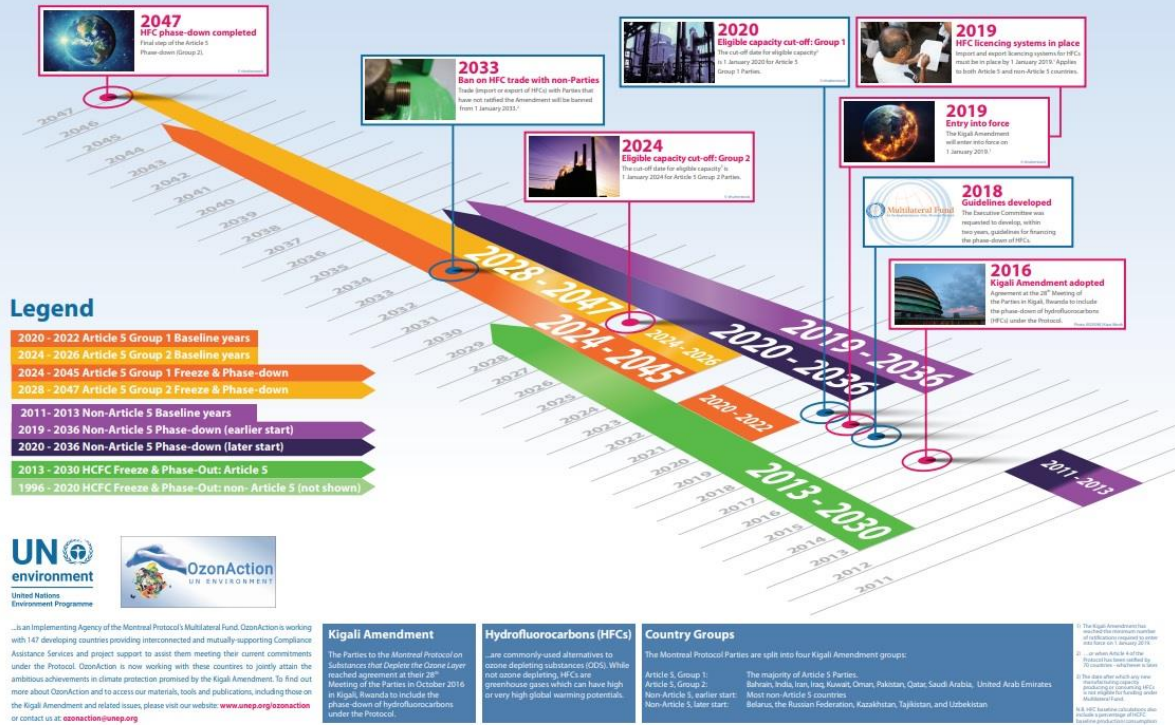
The videos provide useful guidance on safety and best practice, understanding the difference between different identifier units, testing procedures and identification of results.

It is intended for use by Montreal Protocol National Ozone Officers, Customs and Enforcement Officers as well as technicians involved in the servicing and maintenance of refrigeration and air-conditioning systems.

Available for free on the Google play store (Apple version coming soon) Search for "UNEP Refrigerant ID" or use the QR code.



# The Path from Kigali: HFC Phase-Down Timeline



## The Path from Kigali: HFC Phase-Down Timeline

This timeline, produced by OzonAction, highlights key hydrofluorocarbons (HFCs) phase-down dates.

Click [here](#) to download the timeline

**RAC Videos**

Download on the App Store

GET IT ON Google Play

## New videos available on the OzonAction RAC video application

A series of new videos has just been released on the Refrigeration and Air-conditioning Technician Video Series application, with a focus on working with flammable refrigerants ...

**50,000 downloads and counting!**

To install, search for "RAC Video" in the Google Playstore or Apple IOS store, or scan the QR code.



### GWP-ODP Calculator Smartphone Application

The application allow you to easily convert ODP, CO<sub>2</sub>-eq and metric quantities of refrigerants and other chemicals.

- Helps in understanding and reporting under the Montreal Protocol (and future commitments under the Kigali Amendment)
- The calculator will automatically perform the conversion between metric

- tonnes, ODP tonnes and/or CO<sub>2</sub>-equivalent tonnes (or kg) and display the corresponding converted values
- The app includes both single component substances and refrigerant blends
- The components of a mixture and their relative proportions (metric, ODP, CO<sub>2</sub>-eq) are also displayed.

Available for **free** from the **Apple IOS store** and **Google PlayStore**. Search for **"GWP ODP CALC"** in the Playstore to install!

**Download it Now!**



### OzonAction Smartphone Application WhatGas? Quickly search for the information you need

- Chemical name
- Chemical formula
- Chemical type
- ASHRAE designation
- Trade names
- HS code
- CAS number
- UN number
- Montreal Protocol Annex and Control measures
- Ozone depleting potential (ODP)
- Global warming potential (GWP)
- Blend components
- Toxicity and flammability class
- Main uses

### OzonAction Smartphone Application WhatGas?

Available for **free** in the **Google Play** and **Apple IOS Store**

Scan the QR code or search for **"UNEP"**, **"OzonAction"** or **"WhatGas?"**



**The Kigali Amendment to the Montreal Protocol - Opportunities and Next Steps - OzonAction Video**

The Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer reached agreement at their 28<sup>th</sup> Meeting of the Parties on 15 October 2016 in Kigali, Rwanda to phase down hydrofluorocarbons (HFCs). The UN Environment, OzonAction developed a video to find out from renowned international scientific, health, technical, financial and national experts about background and significance of this Kigali amendment.

The amendment presents many opportunities: improving the environment, refrigeration and air-conditioning systems and especially energy efficiency. It also presents new challenges. It is absolutely critical now for industry, governmental bodies and civil society to work together to adopt greener technologies in each country of the world and fight global warming.

[OzonAction YouTube](#) | See also: [United Nations Treaty Collection](#)

**OzonAction Factsheets**

**NEW >>> UN Environment-ASHRAE Factsheet Update on New Refrigerants Designations and Safety Classifications**

OzonAction Series of [19 Fact Sheets](#) related to the Kigali Amendment.

[HS codes for HCFCs and certain other Ozone Depleting Substances ODS](#) (post Kigali update).

[The Kigali Amendment to the Montreal Protocol: HFC Phase-down](#) - The phase-down of HFCs under the Montreal Protocol on Substances that Deplete the Ozone Layer has been under negotiation by the Parties since 2009 and the successful agreement on the Kigali Amendment at the 28th Meeting of the Parties on 15 October 2016 in Kigali, Rwanda to phase-down hydrofluoro-carbons (HFCs) continues the historic legacy of the Montreal Protocol. This factsheet summarises and highlights the main elements of the Amendment of particular interest to countries operating under Article 5 of the Protocol (Article 5 Parties).

[Refrigerant Blends: Calculating Global Warming Potentials](#) (post-Kigali update).

[Global Warming Potential \(GWP\) of Refrigerants: Why are Particular Values Used?](#) (post-Kigali update).

[Tools Commonly used by Refrigeration and Air-Conditioning Technicians.](#)



**OzonAction Multimedia Video Application: Refrigeration and Air-conditioning Technician Video Series - Over 50,000 download to date**

- OzonAction has launched an exciting new application which hosts series of short instructional videos on techniques, safety and best practice for refrigeration and air-conditioning technicians.

This application, consisting of short instructional videos on techniques, safety and best practice, serves as a complementary training tool for refrigeration and air-conditioning (RAC) sector servicing technicians to help them revise and retain the skills they have acquired during hands-on training.

**New videos on flammable refrigerants just added!**

Please share with your RAC associations, technicians and other interested stakeholders...

[OzonAction Multimedia Video Application: Refrigeration and Air-conditioning Technician Video Series](#)

Available in the [Android Play Store](#) and [Apple Store/iTunes](#).

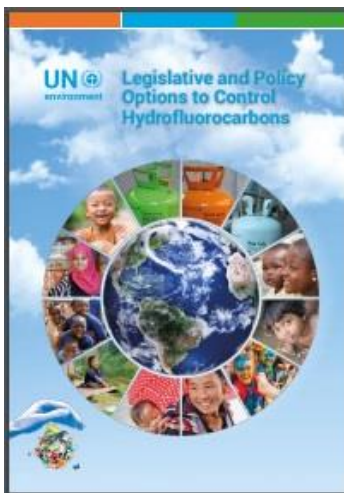
(Just search for "OzonAction", or scan this QR code)

## Publications





Latest issue of the Centro Studi Galileo - [Industria & Formazione](#). La rivista per il tecnico della refrigerazione e della climatizzazione, N. 424, 2019



**Legislative and Policy Options to Control Hydrofluorocarbons**

In order to follow and facilitate the HFC phase-down schedules contained in the Kigali Amendment, the Parties, including both developed and developing countries, will have to implement certain measures.

This booklet contains a recommended set of legislative and policy options which the developing (Article 5) countries may wish to consider for implementation. It is intended to be a guide/tool for countries.

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# Events

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**2019**

**Call for abstracts - 15<sup>th</sup> Cryogenics 2019 Conference**, 7-11 April 2019, Prague, Czech Republic

• **8<sup>th</sup> Conference on Ammonia and CO<sub>2</sub> Refrigeration Technologies**, 11-13 April 2019, Ohrid, Macedonia (FYROM)

• **25<sup>th</sup> IIR International Congress of Refrigeration** - 24-30 August 2019, Montreal, Canada

Click [here](#) for more information / [International Institute of Refrigeration](#)

## Reading



[Twenty Questions and Answers About the Ozone Layer](#), presents complex science in a straightforward manner. It complements the [2014 Scientific Assessment Report of Ozone Depletion](#) by WMO and the U.N. Environment Programme.

Lead Author:  
Michaela I. Hegglin

Coauthors:  
David W. Fahey, Mack McFarland, Stephen A. Montzka, Eric R. Nash



[Primer on Hydrofluorocarbons \(HFCs\)](#) - IGSD -11 January 2018

Summary:

Fast action under the Montreal Protocol can limit growth of hydrofluorocarbons (HFCs), prevent 100 to 200 billion tonnes of CO<sub>2</sub>-eq by 2050, and avoid up to 0.5°C of warming by 2100.

Lead authors:

Durwood Zaelke, Nathan Borgford-Parnell, and Stephen O. Andersen.

Contributing authors:

Kristin Campbell, Xiaopu Sun, Dennis Clare, Claire Phillips, Stela Herschmann, Yuzhe Peng Ling, Alex Milgroom, and Nancy J. Sherman.



The [IIR International Dictionary of Refrigeration Available in 11 languages](#), the complete version of the International Institute of Refrigeration (IIR) International Dictionary of Refrigeration is now freely accessible online. The IIR International Dictionary of Refrigeration offers researchers, industrialist or

administrations the practical resources required to produce content related to refrigeration technologies in multiple languages.

This online tool allows you to find definitions, in English and French, of scientific and technical terms, as well as identify terms in the language of your choice and find corresponding translations in the 10 other languages. The dictionary provides term searches in Arabic, Chinese, Dutch, English, French, German, Italian, Japanese, Norwegian, Russian and Spanish.

Access the International Dictionary of Refrigeration on the IIR [website](#)



Letter to the Editor

**Refrigerants: There is still no vision for sustainable solutions**

Risto Ciconkov

**Refrigerants: There is still no vision for sustainable solutions**

by Risto Ciconkov

Letter to the Editor, International Journal of Refrigeration

**Abstract and highlights**

**Optimization, monitoring, and maintenance of cooling technology** **KIGALI**


This Knowledge Brief from the Kigali Cooling Efficiency Program, outlines the need for maintaining and servicing of cooling technology. It estimates that better optimization, monitoring, and maintenance of cooling equipment the potential to save 30Gt of CO<sub>2</sub> emissions by 2050.

**THE NEED FOR COOLING EFFICIENCY**  
Cooling is essential to health, prosperity, and the environment, underpinning many of the Sustainable Development Goals. The currently most cooling is energy intensive and highly polluting. Eliminating or reducing emissions, or at least ensuring that not only just pollution from existing cooling but to ensure future cooling needs are met sustainably.

**COOLING ACCOUNTS FOR ~ 7% GHG EMISSIONS**  
Use of cooling technologies causes substantial global GHG emissions of between 3.81 and 4.71 GtCO<sub>2</sub>e as a 10% global emissions. The International Institute of Refrigeration has estimated that cooling consumes 12.7% of global electricity (3,300 TWh) is based on 2010 consumption. Indeed emissions from electricity to power cooling technologies causes 82% of cooling emissions. The impact of global GHG emissions from existing equipment is projected to grow between now and 2050 as replacement rates gain access to energy and new technologies. It is estimated that improving the efficiency of cooling equipment between now and 2050 can avoid the amount of approximately 30Gt CO<sub>2</sub>e.

**OPTIMIZATION, MONITORING, & MAINTENANCE CAN REDUCE TOTAL COOLING EMISSIONS BY 10%**  
Neglecting the optimization, monitoring, and maintenance of cooling equipment results in increased energy use, lower cooling performance, and expensive equipment. Effective optimization,

monitoring, and maintenance of cooling equipment could deliver substantial electricity savings of up to 22% (CO<sub>2</sub> 10%), and reduced equipment has been estimated to bring some, leading to emissions savings of up to 30Gt CO<sub>2</sub>e a.



The global stock of room air conditioners is expected to grow from 1.6 billion units in 2015 to 2.3 billion units in 2050. (Climate Energy Network, 2015)

**CARBON TRUST** **ASRAE**

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“**Optimization, monitoring, and maintenance of cooling technology**” outlines the need for maintaining and servicing of cooling technology. It estimates that better optimization, monitoring, and maintenance of cooling equipment the potential to save 30Gt of CO<sub>2</sub> emissions by 2050.

**Cooling as a Service (CaaS)** **KIGALI**

This brief presents a new approach to cooling – Cooling as a Service. This approach can benefit companies, governments and society at large and is based on the servitization concept which is rapidly penetrating other marketplaces.

**WHAT IS CaaS?**  
The standard business model of delivering cooling technology involves the manufacturer, sale, use, and disposal of equipment. Higher production volumes generate greater economies of scale and lower prices. As a result, manufacturers lack a strong incentive to innovate or invest in research and development to improve the energy and resource use of cooling products. Alternative business models are possible – and governments must create incentives and regulatory frameworks to support such models.

CaaS in its simplest form involves a customer paying for the cooling they require, rather than the physical product or infrastructure that delivers the cooling. Examples of CaaS models include direct cooling, where customers do not own the cooling infrastructure, and pay for services (e.g. cooling) through a technology provider, and maintenance of the cooling equipment, and services (e.g. through periodic payments) made for the customer. These payments are fixed over the period of the cooling service contract (e.g. monthly, bi-monthly, quarterly, or other intervals of cooling use), and are based on the cooling usage. The payments are independent of the cooling load or energy. This model is most appealing to the client in a broader sense, customers may also view some CaaS models as a form of CaaS as they also can involve a series of ongoing service payments and avoid the upfront capital costs of cooling equipment.

**WHAT IS CaaS BENEFICIAL?**  
As the global world, the anticipated explosion of demand for cooling in developing countries become more pronounced, and as urbanization and planetary warming increase, will lead to a rapid escalation of energy and resource use from cooling. The IIR projects that global annual energy use from space conditioning alone will triple in amount to 1,000 TWh in 2050, under a business as usual (BAU) scenario (IA, 2018). There is an urgent need to reduce the energy intensity and carbon footprint from cooling, and to ensure efficient cooling systems are affordable to all those who need them.

CaaS models benefit customers through lower energy and maintenance costs, the delivery of efficient capital investments, industry leading equipment, and a transparent and predictable pricing structure. The model effectively turns capital expenditure into an operational expense for clients, freeing up capital for other investment priorities. The model also reduces the perceived technology risk for the client, as they are not required to invest in the technology directly and are not exposed to equipment failure.

CaaS gives technology providers a stronger incentive to increase their sales profits by reducing their product operating costs through innovation, helping maximize profit margins between manufacturers and clients. Some cooling technology providers are already offering CaaS, to differentiate themselves in the marketplace and compete against less quality, inefficient and less cost cooling solutions.

CaaS can reduce the life-cycle cost of cooling equipment by effectively servicing and maintaining lowering the risk of operational breakdowns and ensuring performance through maintenance can deliver electricity savings up to 20% (IIR CEP 2018).



**BASE**

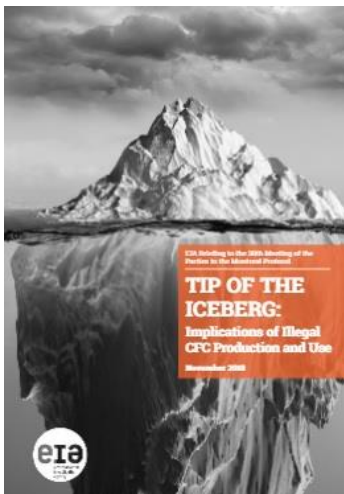
© 2018 Base. All rights reserved. Kigali Cooling Efficiency Program is a registered trademark of Carbon Trust.

“**Cooling as a Service (CaaS)**” presents a new service approach to cooling, which can benefit companies, governments and society at large and is based on the servitization concept which is rapidly penetrating other marketplaces.



[Impact of Standards on Hydrocarbon Refrigerants in Europe – Market research report](#). The market research report was realised for the EU-funded [LIFE FRONT](#) project. Amongst the main result of the market research:

- Current charge limits set in standards both restrict and obstruct the development of hydrocarbon technology
- Over 50% survey respondents already work with hydrocarbons to some extent
- Most of those planning to start working with hydrocarbons in the future will do that in 2019-2020 timeframe - revision of standards could have a major impact on the scale of this shift
- Large proportion of respondents indicated they manufacture equipment using multiple refrigeration circuits - allowing higher hydrocarbon charge limits per single refrigeration circuit would have a profound impact on cost and availability of larger units.



[Tip of the Iceberg: Implications of Illegal CFC Production and Use](#). The Environmental Investigation Agency (EIA) recently released report urges Parties to the Montreal Protocol to address a number of remaining unanswered questions, in particular the absence of comprehensive data regarding the size of current banks of CFC-11 in PU foam and other products or equipment.



[Cold Hard Facts 3 - Review of the Refrigeration and Air Conditioning Industry in Australia](#) - The refrigeration and air conditioning industry is the largest user of synthetic greenhouse gases and ozone depleting substances in Australia. Cold Hard Facts 3 provides an economic and technological assessment of the refrigeration and air conditioning industry in Australia in 2016. The report includes an analysis of the size and economic value of the industry, the equipment and refrigerant gas bank, trends in gas imports and equipment, and direct and indirect emissions in this sector. [...] This study provides a broad view of the composition, size and value of the industry, and projections for its future. This will assist industry and policy makers with management of ozone depleting substances as



they are phased out, and synthetic greenhouse gases, including hydrofluorocarbons (HFCs) which are being phased down from January 2018.

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## Miscellaneous

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### I am in the Montreal Protocol Who's Who... Why Aren't You?

The United Nations Environment, OzonAction, in collaboration with Marco Gonzalez and Stephen O. Andersen are updating and expanding the "Montreal Protocol Who's Who".

We are pleased to invite you to submit your nomination\*, and/or nominate Ozone Layer Champion(s). **The short profile should reflect the nominee's valuable work related to the Montreal Protocol and ozone layer protection.**

Please notify and nominate worthy candidates through the **on-line form**

We look forward to receiving your nomination(s), and please feel free to contact our team for any further assistance concerning your nomination.

**Take this opportunity to raise the profile of women and men who made an important contribution to the Montreal Protocol success and ozone layer protection.**

- View the «Montreal Protocol Who's Who» **introductory video**
- Contact : [Samira Korban-de Gobert](#), UN Environment, OzonAction

*\* If you are already nominated, no need to resubmit your profile*



### **New International Journal of Refrigeration service for IIR members -**

Access the complete archives of the International Journal of Refrigeration (IJR) online. Designed with IIR members in mind, this new and practical electronic subscription gives members substantial advantages:

- Immediate and permanent access to the latest research and to IJR archive
- Access the latest articles as soon as they become available online.
- Browse, search and read each one of the nearly 4,500 papers since Volume 1, Issue 1.

- Unlimited access to seminal contributions to the field of refrigeration dating back to 1978.
  - Keep up-to-date with subscriptions to customized e-alerts on New Volumes, Topics and saved Searches.
- Enhanced content and functions
- Easily export references, citations and abstracts.
  - Print, download or share articles with colleagues or peers.

- See which papers, published in Elsevier or elsewhere, have cited any selected article.
  - Consult the research highlights overview of articles in volumes from 2012 onwards.
- To access this new service, click [“activate my e-IJR subscription now”](#) and follow the instructions.



**International Observers - New AREA membership category** - Due to the significant worldwide interest in European legislative developments and the increase in competence of personnel who handle new refrigerants, AREA is pleased to introduce its brand new “International Observer” membership category. This provides a fantastic opportunity for non-European RACHP installer bodies the world, to benefit from the expertise and discussions within Europe through access to AREA. Contact: [info@area-eur.be](mailto:info@area-eur.be)



**The International Institute of Refrigeration supports World Refrigeration Day** - As the only independent intergovernmental organisation in the field of refrigeration, the International Institute of Refrigeration (IIR) joins associations and companies worldwide to support the initiative of an official World

Refrigeration Day on 26 June every year. The annual World Refrigeration Day, to be launched on 26 June 2019, aims to raise awareness among the wider public about the importance of refrigeration technologies in everyday life.

Refrigeration is essentially a question of temperature and, as such, it only seems natural to celebrate the field on the birthday of the pioneer at the origin of the international unit of temperature, Lord Kelvin (Sir William Thomson) – born 26 June 1824.

With increasing global stakes at hand, over the past years refrigeration has come to take a leading role at the heart of international affairs.

The inauguration of a World Refrigeration Day would not only be an ideal way to recognise the many historical achievements of the industry, but also a means to anticipate and overcome together the challenges we face. ... Click [here](#) for more information.

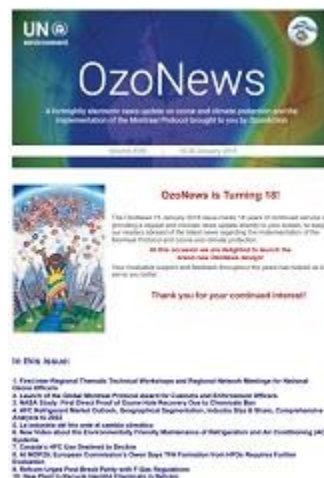


**Global Cooling Prize - Cooling for all, without warming the planet.**

An innovation competition to develop a climate-friendly residential cooling solution that can provide access to cooling to people around the world without warming the planet

Current and previous OzoNews Issues, are available from  
OzonAction website

Download a [PDF](#)



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If you have questions or comments regarding any news item, please contact directly the source indicated at the bottom of each article.

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Reviewed by: Shamila Nair-Bedouelle, Head OzonAction Branch, and Ezra Clark, OzonAction

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